Application Number 10/531069
Response to the Office Action dated May 9, 2008

REMARKS

Favorable reconsideration of this application is requested in view of the following remarks.

The specification appearing at page 3, lines 22-25 has been amended editorially. The specification appearing at page 14, lines 15 to page 15, line 2 has been amended to clarify that the pharmaceutical composition contains a tablet, granule, or fine granule or the tablet, granule, or fine granule and may contain further a gel-forming polymer and that the composition may be filled in a capsule as supported by the specification at page 3, lines 22-25.

Claim 46 has been amended to clarify that core particles of both tablet, granule, or fine granule of composition (i) and that of composition (ii) include the basic inorganic salt stabilizer in addition to the active ingredient as supported by the specification, for example, examples 34-36 at page 339 which contain enteric-coated granules of examples 29 and controlled-release granules of example 30. Example 29 includes granules of example 28 at page 334 prepared from granules of example 27 at page 333, and further from granules of example 26 at pages 332-333. To both granules of examples 26 and 27, $MgCO_3$ is added (see pages 332-333). Example 30 includes example 28 at page 334 that is prepared from example 27, which includes $MgCO_3$ and to which $MgCO_3$ is added, and accordingly, example 30 also includes $MgCO_3$.

Claims 41-42 and 47 and withdrawn claims 1-2, 5-7, 9-10, 14, 24-27, 33, and 36 have been amended editorially.

The specification has been objected to as improper antecedent basis for the claimed subject matter. The specification has been amended to clarify that the subject matter of claim 41-49 i.e., a capsule containing a tablet, granule, or fine granule and optionally a gel forming polymer, is included in the specification at page 14, lines 15-25

as discussed above. Accordingly, the subject matter is described in the specification, and this objection should be withdrawn.

Claims 41, 42, 46, and 47 have been objected to because of informalities. Claims 41, 42, 46, and 47 have been amended to include proper antecedent basis that clarifies the relationship of pH range and the active ingredient among those in the claims. Accordingly, this objection should be withdrawn.

Claims 41-49 have been rejected under 35 U.S.C. 112, first paragraph, as not complying with the enablement requirement. Applicants respectfully traverse this rejection.

As discussed above, the subject matter described in the specification is a pharmaceutical composition filled in a capsule that comprises a tablet, granule, or fine granule or the tablet, granule, or fine granule and optionally a gel-forming polymer, wherein a release of the active ingredient is controlled. Thus, claims 41-49 are supported by the specification, and the examples of the specification sufficiently disclose information for those skilled in the art to produce the pharmaceutical formulation of the subject matter. Accordingly, this rejection should be withdrawn.

Claims 41-49 have been rejected under 35 U.S.C. 112, second paragraph, as being indefinite. Applicants respectfully traverse this rejection.

Claim 41 has been amended to clarify that the composition (i) and composition (ii), both of which include the tablet, granule, and fine granule and are filled in a capsule, are different but both include the compound of formula (I') as the active ingredient. Composition (i) releases the active ingredient at pH 6.0-7.5, and composition (ii) releases it at pH 5.0-6.0. The two-composition formulation that releases the active ingredient at two different pH is supported by the specification at page 15, line 16 - page 16, line 3.

Claims 42 and 46 have been amended to clarify that the active ingredient is the same active ingredient as that included in the compositions (i) and (ii) of claim 41.

Due to the amendment to claim 41, it is clear that the active ingredient in claims 43-45 is the same active ingredient as that included in the compositions (i) and (ii) of claim 41.

For a purpose of understanding this two-composition capsule formulation, Applicants respectfully note that a size of the tablets included in the capsule is described in the specification as 50 μm – 5 mm, the lower part of which would be understood to be too small for a patient to take as a tablet itself but small enough to be filled in a capsule (see page 31, lines 19-24 of the specification).

Accordingly, claims 41-49 are definite and this rejection should be withdrawn.

Claims 41 and 43-48 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Beckert et al. (International Patent Application Publication No. WO 02/060415) in view of Kelm et al. (U.S. Patent No. 5,656,290). Applicants respectfully traverse this rejection.

Beckert merely discloses lansoprazole in a long list of candidates of active ingredients for a formulation (see para. [0053] at pages 3-4) and fails to disclose any example that includes lansoprazole or compound (I'). In addition, Beckert discloses a capsule formulation including pellet A and pellet B (see paras. [0018]-[0019] at pages 1-2). However, the formulation of Beckert is intended to provide a continuous sustained release in the entire intestinal region (see para. [001] at page 1). A polymer coating used by Beckert in examples to form pellets A and B is EUDRAGIT®, which is water-insoluble and is used to control release in gastro-intestinal tract (see paras. [0031]-[0032] at page 2 and [0048]-[0049] at page 3 and a copy of catalog of EUDRAGIT® attached hereto). Thus, pellet A receives an outer polymer coating and dissolves slowly at pH 6.8 such as 40-70 % for 2 hours and 60-100 % for 4 hours (see paras. [0001] and [0012] at page 1 and [0024] at page 2) as Beckert designs. Pellet B may receive one polymer coating and dissolves slowly such as at pH 6.8, 10 % or less for 2 hours and 20 % or less for 4 hours, and at pH7.2 about 40-60 % for 3 hours (see para. [0046] at page 3). Accordingly, both pellets of Beckert slowly dissolve at pH 6.8-7.2, and Beckert fails to disclose a pellet that dissolves and releases the active ingredient at pH 5.0-6.0 as claim 41

requires. By having composition (ii) dissolving at pH 5.0-6.0 and composition (i) that includes the polymeric substance for controlled release at higher pH 6.0-7.5, the capsule formulation of claim 41 releases the active ingredient rapidly from composition (ii) at the pH of the small intestine, which enhances a blood level at an earlier stage after administration and initiates efficacy of the active ingredient at the earlier stage. Then, the active ingredient that is released from composition (i) later at higher pH 6.0-7.5 maintains the blood level and the efficacy (see page 113, lines 10-22 and page 114, line 23 – page 115, line 10 of the specification). Such a two-step release pattern composition is different from the pattern contemplated by the reference. Accordingly, claim 41 is distinguished from Beckert.

Kelm discloses that pH is different in various parts of the gastrointestinal system (see coln. 10, lines 11-16). Kelm disclose a formulation that delays a release of bisacodyl until the formulation has reached a portion of the colon where pH is greater than 7 (see coln. 10, lines 32-37). The formulation of Kelm includes an outer coating that prevents release of the active ingredient until the formulation reaches a target organ such as colon and dissolves at pH 6.8-7.2 and an inner coating that dissolves at pH 5-6.3 (see coln. 10, lines 42-50). This formulation is basically the same as pellet A of Beckert (see paras. [0024] and [0035] at page 2), and Kelm fails to disclose two compositions, each of which includes an active ingredient. In addition, Kelm discloses only use of bisacodyl. Therefore, Kelm discloses no more than pellet A of Beckert and does not remedy the deficiencies of Beckert.

Accordingly, claim 41 is distinguished from Beckert in view of Kelm, and this rejection should be withdrawn.

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In view of the above, Applicants request reconsideration of the application in the form of a Notice of Allowance.

Respectfully submitted,

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